

Application No. 10/006,373
Response to Office Action

Customer No. 01933

R E M A R K S

Reconsideration of this application, as amended, is respectfully requested.

THE CLAIMS

New independent claim 28 has been prepared based on the subject matter of (now canceled) claims 12 and 17.

New claims 29 and 30 depending from new claims 28 and 29, respectively, have been prepared based on portions of the subject matter of (now canceled) claim 18.

New claims 31 and 32 depending from new claim 28 respectively recite that the light source comprises one laser light source and a plurality of laser light sources, as shown in Figs. 1 and 2, respectively.

New claims 33 and 34 depending from new claim 28 correspond to the subject matter of (now canceled) claims 13 and 14, respectively.

New claim 35 depending from new claim 28 has been prepared based on the subject matter of (now canceled) claim 19. (See also FIG. 3.)

New claim 36 and 37 depending from new claims 28 and 36, respectively, have been prepared based on the subject matter of claims 10 and 11, respectively.

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And new claims 38 and 39 depending from new claims 28 and 38, respectively, have been prepared to recite the structure of the laser microscope of the present invention whereby the laser microscope detects fluorescence from a sample.

No new matter has been added, and it is respectfully requested that new claims 28-39 be approved and entered.

THE PRIOR ART REJECTION

Claims 10-27 were rejected under 35 USC 103 as being obvious in view of USP 6,167,173 (previously cited "Schoeppe et al") and WO 98/57152 (newly cited "Goix"), taken as a pair or together with one of USP 4,449,821 (previously cited "Lee") and USP 5,684,582 (previously cited "Eastman et al"). These rejections, however, are respectfully traversed with respect to new claims 28-39 set forth hereinabove.

According to the present invention as recited in new independent claim 28, a laser microscope is provided which irradiates a sample with a laser light including laser lines of different emission wavelengths. As recited in new independent claim 28, the laser microscope comprises: a light source to emit the laser light; a spectral resolution section to spectrally resolve the laser light into lights of the different emission wavelengths; a light receiving element array to receive the lights simultaneously and to output a detection signal that

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includes light intensity information of the lights; and a controller to simultaneously control light intensities of the laser lines based on the detection signal.

Thus, according to the present invention as recited in new independent claim 28, the intensities of the lines of different emission wavelengths included in the laser light are stabilized simultaneously.

By contrast, and as recognized by the Examiner on page 3 of the Office Action, Schoeppe et al does not disclose, teach or suggest a spectral resolution section to spectrally resolve the laser light into lights of the different emission wavelengths, a light receiving element array to receive the lights simultaneously and to output a detection signal that includes light intensity information of the lights; and a controller to simultaneously control light intensities of the laser lines based on the detection signal.

For this reason, the Examiner has cited Goix to supply the missing teachings of Schoeppe et al.

It is respectfully pointed out, however, that the structure shown in Fig. 3C of Goix is provided for detecting fluorescent light from a sample. That is, according to Goix, the grating 313 and array 315 are used to detect multiple fluorescent bands emitted from a sample under observation. Specifically, the light from the sample is passed through interference filters 317 to

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single out the fluorescent emission of the fluorescent substance 106. (See page 7, lines 21-31 of Goix).

Thus, it is respectfully submitted that Goix discloses detecting fluorescence in Figs. 3A-3C, but does not disclose, teach or suggest detecting an intensity of the laser beam(s) 304.

It is respectfully submitted, therefore, that even if Schoeppe et al and Goix were combinable in the manner suggested by the Examiner, the combination thereof still would not disclose, teach or suggest simultaneously detecting intensities of lights of the different emission wavelengths of laser lines in a laser light, as according to the present invention as recited in new independent claim 28.

Indeed, it is respectfully submitted that according to Schoeppe et al the filter unit 21 and the monitor diode 19 are used to monitor in an isolated manner the output of a determined (one) laser line (see column 4, lines 6-8) to stabilize the laser line. Thus, since a microscope of Schoeppe et al actively selects a wavelength of a laser line to be monitored by controlling the filter unit 21, the lines of different wavelengths may only be monitored in sequence according to Schoeppe et al.

As acknowledged by the Examiner on page 4 of the Office Action, moreover, even the combination of Schoeppe et al and Goix does not disclose simultaneously controlling the light

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intensities of the laser lines. For this reason, the Examiner has cited Lee to supply the missing teaching of Schoeppe et al and Goix.

It is respectfully submitted, however, that Lee merely discloses detecting the red and blue intensities of a reference beam with color intensity sensors, and then using the detected intensities for controlling a color temperature of the lamp. According to Lee, the outputs of the red and blue sensors are processed in the controller 2 (see 2A, 2D and 2E in Fig. 2), to set the value at the +S terminal of the power supply 2F of the lamp 1. And according to Lee the value at the +S terminal determines the lamp brightness to thereby maintain color temperature (see column 5, in particular lines 40-45).

Thus, it is respectfully submitted that Lee does not disclose, teach or suggest controlling the control light intensities of the respective laser lines, in the manner of the claimed present invention, but rather merely discloses controlling the lamp brightness to maintain color temperature based on detected red and blue color intensities.

It is respectfully submitted therefore, that even if Schoeppe et al, Goix and Lee were combinable in the manner suggested by the Examiner, the combination thereof still would not disclose, teach or suggest a controller to simultaneously

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control light intensities of the respective laser lines based on the detection signal, as recited in new independent claim 28.

Eastman et al, moreover, has merely been cited for the disclosure of a converging lens used with a prism in a spectrophotometer.


In view of the foregoing, it is respectfully submitted that the present invention as recited in new independent claim 28, and claims 29-39 depending therefrom, clearly patentably distinguishes over Schoeppe et al, Goix, Lee and Eastman et al, taken in any combination under 35 USC 103.

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Entry of this Amendment, allowance of the claims and the passing of this application to issue are respectfully solicited.

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned for prompt action.

Respectfully submitted,


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